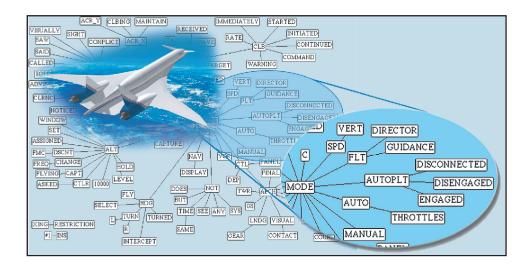


## Contextual Mining of Incident Narratives and Other Text

## **Objective**

Increase safety and performance in aerospace operations through development of methods that enhance understanding of large collections of incidents and their relationships to accidents.



## Approach

Develop contextual methods of situational analysis, modeling, relevance-ranking, database search, and text mining. Implement the methods in software, apply them to collections of incident narratives, accident reports, and other text, and evaluate the results. Work closely with the Aviation Safety Reporting System (ASRS) to support their operational requirements. Obtain patents and commercialize the technology.

## **Impact**

Using these methods, incidents are retrieved and ranked according to the extent that they share situational factors with accidents or other incidents, or according to their relevance to any topic or combination of topics. The technology is currently deployed at the ASRS. Four U.S. and foreign patents are pending. Numerous commercial licenses have been granted. One U.S. airline is beginning to apply the technology to their proprietary database of incident narratives. Application to the Patient Safety Data System, a medical incident database, is planned.

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